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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,707	02/19/2004	Masatoshi Tanaka	0229-0796P	3189
2292	7590	12/13/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			KNABLE, GEOFFREY L	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,707

Applicant(s)

TANAKA, MASATOSHI

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2-19-2004</u> . | 6) <input type="checkbox"/> Other: ____. |

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1. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-5 require that the spiral winding occur to increase *both* the tension and the density towards the shoulder. The original disclosure (this being measured by the original disclosure of the parent application as a divisional application cannot add "new matter" to that originally disclosed in the parent application) however only describes increasing "one of" the tension or the density - it is not seen where the original disclosure describes increasing both. As such, these claims are considered to contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. they are considered to add new matter.

Claim 2 defines relationships for the tension T_n and density D_n using constants K_t and K_d respectively (these constants being from greater than 1 to 3). There however is no original descriptive support for this requirement and thus it is considered to contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. While the original disclosure does describe relationships between T_c and

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T_e and D_c and D_e which could be rewritten to use constants as claimed (as in claims 4 and 6), there is not original descriptive support for the claimed relationships using T_n and D_n rather than T_e and D_e .

In claims 4 and 6, the variables R_c and R_e are defined as the inner radii of the tire band but without any indication of what the state is of the band when this is measured. The original disclosure only provides descriptive support for these variables being measured "in the finished tire". As presently drafted, however, the claim would seem to imply that these are measured after winding - since however the winding is on a cylindrical drum, these would be the same, it being apparent from the specification that these are intended to be *in the finished tire*. This broader definition of the meaning of the variables is considered to represent subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter to more broadly define these radii in a manner that does not indicate that they are in the finished tire.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 1+ of claims 1, 2 and 4, reference is made to a method of making a tire, the tire comprising a tread, sidewall, beads, carcass, etc. The actual positive steps of the method however only describe applying a belt and band, this raising an ambiguity in the scope of the claim. In other words, it is not clear if the claim requires steps to make

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a tire (with tread, sidewalls, etc.) consistent with the preamble or only requires the recited steps: In other words, the inconsistency between the preamble and body of the claim presents this ambiguity rendering the scope of the claims indefinite. It is suggested that the claims be recast in Jepson form to avoid this ambiguity – e.g. by changing “A method...” in line 1 to –In a method— and changing “said method comprising” to –the improvement comprising--.

In claims 4 and 6, the definition of the variables Rc and Re is indefinite and confusing, as it is not clear when in the process these are measured. As presently drafted, the claim would seem to imply that these are measured after winding - since however the winding is on a cylindrical drum, these would be the same, it being apparent from the specification that these are intended to be in the finished tire. Clarification is required.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kojima et al. (US 5,032,198).

Kojima et al. discloses building a tire in which the belt/breaker and band are formed on a drum, the band being formed by spirally winding band cords so as to have gradually increasing tension in the axial direction from the center outwards – note esp. col. 9, line 39 – col. 10, line 7. Further, although the preferred form of this invention in Kojima et al. (like the alternate embodiment in previously cited Ushikubo) uses a contoured drum, the reference clearly indicates that a linear or cylindrical drum shape (e.g. fig. 22) can be used, this being the embodiment where the tension variation is employed (note esp. col. 17, lines 30-45 as well as col. 19, lines 17-20 indicating that the contoured drum (like in Ushikubo) can use constant tension). Kojima et al. also suggests that the pitch can be reduced toward the shoulder (which would increase the cord density) and that this can be apparently combined with winding with increasing tension - note esp. col. 13, lines 2-15 as well as col. 19, lines 20-27 (note also col. 24, lines 15-29). Although it is somewhat difficult to resolve exactly how the embodiments in Kojima et al. are differentiated (and especially which can use a cylindrical drum), it is considered that the above noted disclosures are sufficient to anticipate the invention of claim 1, it further being considered that even if not considered to anticipate, the artisan would have found it obvious from the Kojima disclosure to both vary the tension and density on a cylindrical drum with an expected improvement in the final tire performance.

As to claims 2-6, which require that the tension/density be at least slightly higher in the shoulder, note that Kojima et al. indicates at esp. col. 9, lines 39-49 and col. 24, lines 15-20 that either uniformity can be achieved or if desired greater reinforcing at the

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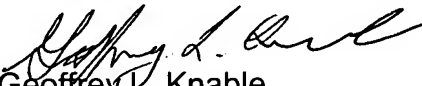
shoulders can be provided. To select either is therefore considered to have been taught or in any event would have been obvious and lead to only the expected results.

Further, an increased density at the shoulders would have been expected to provide an additional or added reinforcement and thus security at the shoulders where potential high speed running separation problems would be most likely to initiate. With respect to claim 6, it is also noted that this claim requires that one of the density and tension are increased, it being noted again that Kojima et al. clearly describes that either can be increased towards the shoulder.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
December 10, 2005